

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims

1-35. (Canceled)

36. (Currently Amended) A method to reduce airway hyperresponsiveness in a mammal, comprising increasing  $\gamma\delta$  T cell action in a mammal that has, or is at risk of developing, a respiratory condition associated with airway hyperresponsiveness by administering a phosphoantigen that activates  $\gamma\delta$  T cells to said mammal, wherein administration of said phosphoantigen reduces airway hyperresponsiveness in said mammal.

37. (Previously Presented) The method of Claim 36, wherein the phosphoantigen comprises isoprenylpyrophosphate (IPP).

38. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered so that the number of  $\gamma\delta$  T cells in the lung tissue of said mammal increases.

39. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered so that  $\gamma\delta$  T cells in said mammal are activated.

40. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is targeted to  $\gamma\delta$  T cells in the lung tissue of said mammal.

41. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is targeted to  $\gamma\delta$  T cells having a T cell receptor (TCR) selected from

the group consisting of a murine TCR comprising Vy4 and a human TCR comprising Vy1.

42. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered by a route selected from the group consisting of inhaled, intratracheal and nasal routes.

43. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered to said mammal in an amount effective to reduce airway hyperresponsiveness in said mammal as compared to prior to administration of said phosphoantigen.

44. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered with a pharmaceutically acceptable excipient.

45. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered within between about 1 hour and 6 days of an initial diagnosis of airway hyperresponsiveness in said mammal.

46. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered within less than about 72 hours of an initial diagnosis of airway hyperresponsiveness in said mammal.

47. (Previously Presented) The method of Claim 36, wherein said phosphoantigen is administered prior to development of airway hyperresponsiveness in said mammal.

48. (Previously Presented) The method of Claim 36, wherein increasing  $\gamma\delta$  T cell action by administration of said phosphoantigen decreases airway methacholine responsiveness in said mammal.

49. (Previously Presented) The method of Claim 36, wherein increasing  $\gamma\delta$  T cell action by administration of said phosphoantigen reduces airway hyperresponsiveness of said mammal such that the FEV<sub>1</sub> value of said mammal is improved by at least about 5%.

50. (Previously Presented) The method of Claim 36, wherein increasing  $\gamma\delta$  T cell action by administration of said phosphoantigen improves said mammal's PC<sub>20methacholine</sub>FEV<sub>1</sub> value such that the PC<sub>20methacholine</sub>FEV<sub>1</sub> value obtained before increasing  $\gamma\delta$  T cell action when the mammal is provoked with a first concentration of methacholine is substantially the same as the PC<sub>20methacholine</sub>FEV<sub>1</sub> value obtained after increasing  $\gamma\delta$  T cell action when the mammal is provoked with double the amount of the first concentration of methacholine.

51. (Previously Presented) The method of Claim 50, wherein said first concentration of methacholine is between about 0.01 mg/ml and about 8 mg/ml.

52. (Previously Presented) The method of Claim 36, wherein said airway hyperresponsiveness is associated with a disease selected from the group consisting of chronic obstructive disease of the airways and asthma.

53. (Currently Amended) A method to reduce airway hyperresponsiveness in a mammal, comprising increasing  $\gamma\delta$  T cell action in a mammal that has, or is at risk of developing, a respiratory condition associated with airway hyperresponsiveness by administering a composition consisting essentially of a phosphoantigen that activates  $\gamma\delta$  T cells directly to the lung tissue of said mammal, wherein administration of said phosphoantigen reduces airway hyperresponsiveness in said mammal.

54. (New) The method of Claim 36, wherein the mammal is a human.